## Abstract

Two comparators are arranged to generate a pulse-width modulator (PWM) control pulse. The first comparator is arranged to start the PWM control pulse, while the second comparator is arranged to stop the PWM control pulse. The first 5 comparator can be a high speed CMOS comparator that includes a built-in offset. The first and second comparators can be arranged such that the built-in offset of the first comparator dominates the overall operation at the start of the control pulse. The start of the PWM control pulse is initiated by a ramp voltage and a predetermined reference level instead of a clock edge. The PWM control pulse can be linearly varied down to a zero pulse width. The PWM control pulse may be used to control the on-time of the switching element in a switching-type converter.

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